

TITLE 329 SOLID WASTE MANAGEMENT BOARD

LSA Document #07-552

SUMMARY/RESPONSE TO COMMENTS FROM THE SECOND COMMENT PERIOD

The Indiana Department of Environmental Management (IDEM) requested public comment from September 12, 2007, through October 12, 2007, on IDEM's draft rule language. IDEM received comments from the following parties:

Ronda L. Hooper, Staff Environmental Engineer, Solid and Hazardous Waste Management, Alcoa Warrick Operations (AWO)

Following is a summary of the comments received and IDEM's responses thereto:

Comment: In proposed 329 IAC 3.1-6-8(7)(A), the commentor stated that this clause should be amended to read

"(A) municipal solid waste landfill permitted under 329 IAC 10 where industrial waste of this type is not otherwise restricted."

There are other landfills referenced in 329 IAC 10 in addition to municipal solid waste landfills that would meet the design requirements under which the delisting was modeled. These landfills should be available for Alcoa's potential use in disposing of the waste under the terms of the delisting. (AWO)

Response: The analysis that forms the basis for this delisting assumed that the delisted waste will be disposed of in a fully lined municipal solid waste landfill. An unlined landfill such as a restricted waste site type III or a construction/demolition site would be clearly unsuitable for a delisted hazardous waste. Restricted waste sites may or may not be lined and are designed and permitted to accept specific wastes. Such a landfill would have to be re-permitted to accept this waste stream, assuming the landfill owner would agree to accept the waste. Alcoa has not indicated that such an arrangement would be considered for this waste stream. IDEM is not aware of any nonmunicipal solid waste landfill or restricted waste site that is currently permitted to accept this waste.

Comment: The commentor requested that the maximum quantity of waste delisted under this rule be expressed in tons rather than cubic yards. (AWO)

Response: IDEM agrees and will amend 329 IAC 3.1-6-8(9) to allow delisting of up to 5,250 short tons (4,200 cubic yards x 1.25 short tons per cubic yard) per calendar year under this exclusion.

Comment: In 329 IAC 3.1-6-8(3)(C), the commentor requests that the clause be amended to read as follows:

"(C) Manage the waste as hazardous waste until Alcoa receives and submits in writing to IDEM the analysis from three (3) consecutive truckload shipments of the waste that are within the delisting level for that constituent. Upon receipt and submittal to IDEM of this analysis, Alcoa can resume managing the waste under this exclusion."

Alcoa would like the ability to self-implement a resumption of non-hazardous landfilling as soon as the data supports the resumption. Alcoa is concerned that resuming non-hazardous waste landfilling may be unnecessarily delayed due to the potential that the department may not be able to provide a written response or approval in a timely manner. (AWO)

Response: Delays associated with resumption of non-hazardous disposal of delisted wastes are typically due to delayed receipt of analytical data and negotiations over action required to resume non-hazardous disposal. If Alcoa can provide timely notice and analytical information to support a decision, IDEM will provide any required response, or approval if warranted by the facts, in a timely manner. Alcoa can minimize or eliminate any such delay by carefully managing the waste stream within the constraints of this rule. IDEM cannot abandon effective oversight of these exclusions by allowing the rule to be self-implementing. Such a provision would fall below the standards for hazardous waste management programs upon which Indiana's program authorization is based.

Comment: The commentor requests that proposed 329 IAC 3.1-6-8(2)(C) and (D) be revised to read as follows:

"(C) If the relative percent difference (RPD) between the two (2) samples for any individual constituent is forty percent (40%) or less for the first four (4) quarters, then Alcoa may obtain and analyze one (1) representative sample for that particular constituent of the delisted waste each following quarter. This

applies to all Table 1 parameters. In addition, for hexavalent chromium measured in mg/kg, if the RPD between the first two (2) samples is more than forty percent (40%) in any of the first four (4) quarters and the total hexavalent chromium is at or below twenty five percent (25%) of the delisting level, then Alcoa may obtain and analyze one (1) representative sample for hexavalent chromium each following quarter. The relative percent difference is calculated for each constituent and equals one hundred (100) times the absolute value of the difference between the results divided by the average of the results, as follows:

$$RPD = 100 [(|x_1 - x_2|) / \{(x_1 + x_2) / 2\}]$$

where x1 equals sample results and x2 equals duplicate results.

(D) If any sample result shows any constituent listed in Table 1 at or above fifty percent (50%) of the delisting level for that constituent, then Alcoa must analyze two (2) duplicate samples each quarter for that constituent until authorized by the department to analyze one (1) sample each quarter."

Alcoa proposes that compliance with the 40% RPD levels and 50% of the delisting levels be done on a constituent by constituent basis as it is the individual constituents that trigger these levels and are therefore the object of concern. As the language currently reads, inappropriate additional analysis of all constituents would be required, thus including those constituents for which concern has not been noted.

In addition, Alcoa proposes that the 40% RPD level be modified for the hexavalent chromium total analysis to include an option for dual triggers of exceeding both 40% RPD and 25% of the delisting level. Alcoa has noted that variations in the sample matrix undergoing colorimetric analysis can occasionally impact the RPD outside of the 40% levels. However, Alcoa notes that the highest level of hexavalent chromium found in the delisting petition analytical was 240 mg/kg (6.3% of the delisting limit) against a delisting limit of 3,800 mg/kg. Given the wide gap between actual hexavalent chromium levels found in the waste and the delisting limit, Alcoa proposes that an RPD of over 40% for this constituent would not represent an issue of concern and if the gap between actual [levels of hexavalent chromium in the] waste and the delisting level narrows, the 25% of the delisting limit trigger will maintain protectiveness. (AWO)

Response: While IDEM agrees that the RPD calculation for hexavalent chromium can be modified, IDEM does not agree that a threshold of 25% of the delisting level is appropriate. IDEM will modify the draft rule to allow reduced testing for hexavalent chromium levels equal to or below 10.0 mg/kg, and for levels above 10.0 mg/kg with an RPD of 40% or less.

Comment: The commentor recommends that proposed 329 IAC 3.1-6-8(2)(E) be redesignated as (2)(F) and a new 329 IAC 3.1-6-8(2)(E) be inserted to read as follows:

"(E) After eight (8) consecutive quarters at being below fifty percent (50%) for all delisting constituents, Alcoa may move to twice annual sampling of the delisted constituents. If after eight (8) quarters and six (6) semi-annual sampling events of being below fifty percent (50%) for all delisting constituents, then Alcoa may move to annual sampling of the delisted constituents."

In addition to the potential to petition IDEM for changes in the monitoring frequency found in the current language in clause (2)(E), Alcoa would like a more formally prescribed path to reaching an end point of reduced sampling. (AWO)

Response: Annual sampling is not adequate to detect significant variation in a continuously generated waste. Quarterly sampling will sample approximately 4% of the waste stream. Annual sampling would reduce this minimal sampling to less than 1%. This change would allow a serious deficiency in management of this waste stream resulting in significantly elevated levels of hazardous constituents to go undetected for up to one year. Once detected, the cost to retest the waste, or potentially to remove and properly re-dispose of the waste as hazardous waste, would vastly outweigh any minimal cost savings resulting from reduced sampling. Current EPA delisting rules for F019 waste require quarterly verification testing, and IDEM does not agree that a delisting rule that is less stringent than the current national practice for delisting is either appropriate or in the state's best interest.